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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,201

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Ryuzo Ueno

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EXAMINER

CHAWLA, JYOTI

ART UNIT

PAPER NUMBER

1761

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

8

**Office Action Summary**

Application No.

10/759,201

Applicant(s)

UENO ET AL.

Examiner

Jyoti Chawla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on July 13, 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 4-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/21/04 and 3/7/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

### ***Election/Restrictions***

Applicant's election of Group II in the reply filed on July 13, 2006 is acknowledged.

Claims 1-3 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group I, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on July 13, 2006.

Claims 1-20 are pending and 1-3 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected product. This Election is made FINAL.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Determining the scope and contents of the prior art.  
Ascertaining the differences between the prior art and the claims at issue.  
Resolving the level of ordinary skill in the pertinent art.  
Considering objective evidence present in the application indicating obviousness or nonobviousness.

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(A) Claims 4-7 and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schieweck et al (US 3865957) in view of Goldscher (US 5679781).

Schieweck et al, hereinafter Schieweck, teaches that crystalline isomaltitol is very effective as a low calorie sweetener having the appearance and the utility of sugar. The reference also teaches that isomaltitol can be mixed with other synthetic sweeteners and can be added to everyday recipes in the same amount as sugar (Column 2, lines 20-50 and 65-68). Schieweck teaches a recipe of sandkuchen (A German cake, almost like pound cake), where isomaltitol is added to egg yolks and aerated together before being added to flour (grain) and then egg whites are added. The mixture is folded and blended, i.e., aerated, prior to being baked at 160°C (Column 4, lines 40-56, example IX). Schieweck teaches addition of 4 eggs (yolks and whites), approximate weight depending on the size of the egg 6-7 ounces or 150-180 g wet weight (Good housekeeping Illustrated cookbook, Equivalent amounts table), to 140 grams of crystalline isomaltitol, i.e., the sugar alcohol (isomaltitol) is about 93% of the wet weight of the eggs. The liquid eggs taught by Schieweck in the above ratio fall within the range recited by the applicant in claims 5, 15 and 19. Therefore Schieweck teaches a baked aerated egg product containing isomaltitol comprising alpha-D-glucopyranosyl-1,6-sorbitol (GPS or GPS-1, 6 or GPS-6) liquid eggs and grain (flour) as recited by the applicant in claims 4-7 and 10-20.

Schieweck is silent as to the proportion of two isomers of isomaltitol namely, alpha-D-glucopyranosyl-1,6-sorbitol (GPS or GPS-1, 6 or GPS-6) and alpha-D-glucopyranosyl-1,1-mannitol (GPM or GPM-1,1 or GPM-1). Goldscher teaches that Isomaltitol, a sugar

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alcohol, can be made to achieve the desired ratio between the two isomers alpha-D-glucopyranosyl-1,6-sorbitol (GPS or GPS-1, 6 or GPS-6) and alpha-D-glucopyranosyl-1,1 mannitol (GPM or GPM-1,1 or GPM-1). Goldscher further teaches GPS-6 or GPS levels of 55% or above (Column 1, lines 50-58; Column 3-4 examples 1-6), as recited by the applicant in claims 4, 13 and 16. Goldscher also teaches that the low calorie sugar alcohol based sweetener containing GPS-6 (liquid or crystalline) was used in candies, ice-creams, milk products, baked goods, preserved foods and also as a carrier for artificial sweeteners (Column 3, lines 20-33).

Isomaltitol, a sugar alcohol, has been known in the art as a sweetener and filler either alone or in combination with other artificial sweeteners (Goldscher and Schieweck). Isomaltitol with a desired ratio (55% or above) between the two isomers alpha-D-glucopyranosyl-1,6-sorbitol (GPS or GPS-1, 6 or GPS-6) and alpha-D-glucopyranosyl-1,1 mannitol (GPM or GPM-1,1 or GPM-1) has been known in the art (Goldscher, Column 1, lines 50-58; Column 3-4 examples 1-6). Aerated egg and grain products, such as cakes etc., made with isomaltitol comprising (GPS-6) have also been known in the art (Schieweck). Further it has been known in the art that of the two isomers of Isomaltitol, GPS is more soluble as compared to GPM, which crystallizes quickly out of foods owing to its lower solubility. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Schieweck, if necessary, and add the isomaltitol taught by Goldscher, comprising a higher proportion of GPS-6, because isomaltitol (sugar alcohol) with higher proportion of the isomer GPS, would be more desirable to use in foods as a low calorie sweetener because it would provide

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good initial sweet flavor, good texture, and mouth feel to the products with the long lasting effect and some bulk specially in baked and textured foods, such as cakes and cookies etc.

(B) Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schieweck et al (US 3865957) in view of Goldscher (US 5679781) as applied to claims 4-7 and 10-20 above, and further in view of Moder et al (US 5215774).

Schieweck in view of Goldscher, teaches an aerated egg and flour based cake product made by using isomaltitol (a sugar alcohol) with 55% or more of isomer alpha-D-glucopyranosyl-1,6-sorbitol (GPS or GPS-1, 6 or GPS-6) as a low calorie sweetener.

The references teach use of whole eggs in liquid form in making the cake but do not teach a frozen or dried egg product as recited by the applicant in claims 8 and 9.

Moder et al., hereinafter Moder, teaches a cake, where sugar alcohols are optionally used as sweeteners (column 9, lines 61-63) and where the egg product can either be liquid egg added to the cake mix (column 1, lines 19 and 20) or egg solids (egg albumin and dried yolk) can also be part of the cake mix either as conventional additives or as a substitute for fresh eggs (Column 9, lines 19-22 and 43-45). Moder also teaches that the cake batter can either be prepared for home use or made commercially and sold ready to use (Column 10, lines 40-43) and that the batter can be made and frozen (Column 8, lines 40-50). Thus Moder teaches that it has been known in the art to have egg based cake mixes that contain sugar alcohols (isomaltitol) as artificial sweetener, either as a dry product or as a ready product which may be frozen before final

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preparation as recited by the applicant in claims 8 and 9. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify, Schieweck and Goldscher based on the teaching from Moder and either freeze the batter before baking or create the cake mixture as dry mix (egg, sweetener, flour and milk powder) to be prepared later at the convenience of the consumer. One would have been motivated to do so in order to provide a longer shelf life to the pre-measured or pre-prepared product and save consumer's time in planning and measuring, while still maintaining the desirable appeal of freshly made product.

(C) Claims 4-7 and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schieweck et al (US 3865957) in view of Rapp et al (US2002/0028276 A1).

Schieweck, teaches isomaltitol, sugar alcohol, a low calorie sweetener which can be added to everyday recipes in the same amount as sugar (Column 2, lines 20-50 and 65-68). Schieweck also teaches a sandkuchen (A German cake, almost like pound cake), with isomaltitol and egg yolks aerated together before the addition of flour (grain) and egg whites. The mixture is aerated and baked (Column 4, lines 40-56, example IX). Schieweck teaches 4 eggs (yolks and whites), approximate weight 6-7 ounces or 150-180 g wet weight (Good housekeeping Illustrated cookbook, Equivalent amounts table), and 140 grams isomaltitol, which comes to 93% of the wet weight of the eggs as recited by the applicant in claims 5, 15 and 19. Therefore Schieweck teaches a baked aerated egg product containing isomaltitol comprising alpha-D-glucopyranosyl-1,6-sorbitol (GPS

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or GPS-1, 6 or GPS-6) liquid eggs and grain (flour) as recited by the applicant in claims 4-7 and 10-20.

Schieweck is silent as to the proportion of two isomers of isomaltitol namely, alpha-D-glucopyranosyl-1,6-sorbitol (GPS or GPS-1, 6 or GPS-6) and alpha-D-glucopyranosyl-1,1 mannitol (GPM or GPM-1,1 or GPM-1). Rapp et al., hereinafter Rapp, teaches that Isomaltitol (ISOMALT), a sugar alcohol, can be made such that it is enriched in either of the two isomers alpha-D-glucopyranosyl-1,6-sorbitol (GPS or GPS-1, 6 or GPS-6) and alpha-D-glucopyranosyl-1,1 mannitol (GPM or GPM-1,1 or GPM-1). Rapp further teaches GPS-6 or GPS levels of 57 -99% (Publication, Page 4, Para 0027), as recited by the applicant in claims 4, 13 and 16. Rapp also teaches that the low calorie sugar alcohol based sweetener containing GPS-6 (liquid or crystalline) could be used in candies, ice-creams, milk products, baked goods etc. (Publication, Page 4, Para 0030).

Isomaltitol, a sugar alcohol, has been known in the art as a sweetener and filler either alone or in combination with other artificial sweeteners (Rapp and Schieweck).

Isomaltitol with a desired ratio (55% or above) between the two isomers alpha-D-glucopyranosyl-1,6-sorbitol (GPS or GPS-1, 6 or GPS-6) and alpha-D-glucopyranosyl-1,1 mannitol (GPM or GPM-1,1 or GPM-1) has been known in the art (Rapp Publication Page 4, Paragraph 0027). Aerated egg and grain products, such as cakes etc., made with isomaltitol comprising (GPS-6) have also been known in the art (Schieweck).

Further it has been known in the art that of the two isomers of Isomaltitol, GPS is more soluble as compared to GPM, which crystallizes quickly out of foods owing to its lower solubility. Therefore, it would have been obvious to one of ordinary skill in the art at the



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time of invention to modify Schieweck, if necessary, and add the isomaltitol taught by Rapp comprising a higher proportion of GPS-6, because isomaltitol (sugar alcohol) with higher proportion of the isomer GPS, would be more desirable to use in foods as a low calorie sweetener because it would provide good initial sweet flavor, good texture, and mouth feel to the products with the long lasting effect with some bulk specially in baked and textured foods, such as cakes and cookies etc.

(D) Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schieweck et al (US 3865957) in view of Rapp et al (US2002/0028276 A1) as applied to claims 4-7 and 10-20 above, and further in view of Moder et al (US 5215774).

Schieweck in view of Rapp, teaches an aerated egg and flour based cake product made by using isomaltitol (a sugar alcohol) with 55% or more of isomer alpha-D-glucopyranosyl-1,6-sorbitol (GPS or GPS-1, 6 or GPS-6) as a low calorie sweetener.

The references teach use of whole eggs in liquid form in making the cake but do not teach a frozen or dried egg product as recited by the applicant in claims 8 and 9.

Moder et al., hereinafter Moder, teaches a cake, where sugar alcohols are optionally used as sweeteners (column 9, lines 61-63) and where the egg product can either be liquid egg added to the cake mix (column 1, lines 19 and 20) or egg solids (egg albumin and dried yolk) can also be part of the cake mix either as conventional additives or as a substitute for fresh eggs (Column 9, lines 19-22 and 43-45). Moder also teaches that the cake batter can either be prepared for home use or made commercially and sold ready to use (Column 10, lines 40-43) and that the batter can be made and frozen (Column 8, lines 40-50). Thus Moder teaches that it has been known in the art to have

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egg based cake mixes that contain sugar alcohols (isomaltitol) as artificial sweetener, either as a dry product or as a ready product which may be frozen before final preparation as recited by the applicant in claims 8 and 9. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify, Schieweck and Rapp based on the teaching from Moder and either freeze the batter before baking or create the cake mixture as dry mix (egg, sweetener, flour and milk powder) to be prepared later at the convenience of the consumer. One would have been motivated to do so in order to provide a longer shelf life to the pre-measured or pre-prepared product and save consumer's time in planning and measuring, while still maintaining the desirable appeal of freshly made product.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(US 4024290) Layton et al., teach isomaltitol and specifically, alpha-D-glucopyranosyl-1,6-sorbitol (GPS or GPS-1, 6 or GPS-6) as a bulking agent for all foods specially baked foods.

(US 5534285) Setser teaches low calorie cakes with Palatinit (equimolar mixture of GPS and GPM)

(US 4323588) Vink et al. teach aerated confections with isomaltitol, i.e., GPS and GPM

(US 4248895) Stroz et al. teach sweetener with egg white powdered compositions containing isomaltitol and addition of the sweetener to cakes, candy, chewing gums etc.

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(US 5578339) Kunz et al. teach sweetener composition containing GPS and GPM.

(US 5906852) Klemann et al. teach a low calorie flour replacement with isomalt and Palatinit . The starch replacement is suitable for egg products, cakes, cookies and dough products.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Chawla whose telephone number is (571) 272-8212. The examiner can normally be reached on 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jyoti Chawla  
Examiner  
Art Unit 1761

  
KEITH HENDRICKS  
PRIMARY EXAMINER